

### REMARKS

Claim 7 remains pending in this application. Claims 7 and 11 are rejected. Claim 11 is cancelled herein. Claims 1-6 and 8-10 are previously cancelled. Claim 7 is amended herein merely to address matters of form unrelated to substantive patentability issues.

Applicant herein traverses and respectfully requests reconsideration of the rejection of the claims cited in the above-referenced Office Action.

Claim 11 is rejected under 35 U.S.C. § 112, first paragraph, for containing subject matter lacking an adequate written description in the specification. Claim 11 is also rejected as obvious over Kaoru et al. (JP 2002-343115) in view of Bradley (US 3,654,148) under 35 U.S.C. §103(a). Claim 11 is cancelled herein, rendering both of these rejections moot.

Claim 7 is rejected under 35 U.S.C. § 102(b) as being anticipated by Kaoru et al. Applicant herein respectfully traverses this rejection. “Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, *arranged as in the claim.*” ***Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.***, 221 USPQ 481, 485 (Fed. Cir. 1984) (emphasis added). It is respectfully submitted that the cited reference is deficient with regard to the following.

Applicant respectfully submits that the Examiner did not sufficiently consider a significant feature of the present invention, i.e., ancient water and/or ancient salt

water from deposits sealed in a fractured zone being a phyllite layer or an ancient lime stone present in a layer lower than a metamorphic rock.

Kaoru et al. is the conventional art disclosed in the specification of the present invention. Kaoru et al, discloses “cosmetics and toiletries in which ancient salty water sealed in a crustal deep layer is mixed.” The ancient salty water used in Kaoru et al. is defined as “salty water having been buried in an environment shut of from the external world in depth of the crust in an state sealed in porous coral skeletons of a coral reef for as long a time as tens of thousands of years through a history of complex crustal alteration including upheaval and subsidence in ancient times.”

The ancient salty water of Kaoru et at. is an ancient salty water accumulated in the fractured zone of an ancient coral lime stone and contains a significant amount of a calcium component, while the ancient salty water has problem of having a little amount of an iron component and a sulfur component (sulfide or the like). A reducing ability thereof is limited, and an oxidation reduction potential thereof is altered from a minus value (-80 mV) to plus value (+50 mV) on exposure thereof to the air in a few days. Therefore, since considerable attention is necessary to be paid to preservation and management of the ancient salty water , a container is required to be of a special structure with high air-tightness, and in addition, the salty water cannot sufficiently suppresses generation and accumulation of active oxygen. and lipid peroxide (see paragraph [0036] of the present application).

While the ancient salty water of Kaoru et al. buried in an environment shut off from the external world in depth of the crust in a state sealed in porous coral skeletons of a coral reef for as long a time as tens of thousands of years through a history of complex crustal alteration including upheaval and subsidence in ancient times, it is also a problem that since the layer in depth in the crust and coral reef have been transformed into porous structure in the history of crustal alteration including upheaval and subsidence in ancient times. By drawing up the ancient water sequentially, sea water gradually infiltrates and intrudes into the ancient salty water through cracks and tears, rainfall water also gradually infiltrates and intrudes into the ancient salty water from the ground surface, or polluted groundwater infiltrates and intrudes into the ancient salty water (see paragraph [0037] of the present application).

It has, in fact, been recognized that, as the ancient salty water of Kaoru et al. is sequentially drawn up, a salt concentration alters, and an oxidation reduction potential thereof shifts in a direction from the minus side to the plus side (see paragraph [0038] of the present application). In this regard, Material 2 (included herein as an attachment) shows the measured result of the salt concentration of ancient salty water each of the present invention and Kaoru et al, and Material 1 (also included as an attachment) shows the measured result of oxidation reduction potential of ancient salty water each of the present invention and Kaoru et al.

The results have shown that, there are concerns that the ancient salty water of Kaoru et al. is polluted with artificial harmful materials such as domestic

wastewater and industrial wastewater by infiltration and intrusion of sea water, ground water and rainfall water (see paragraph [0039] of the present specification).

Material 3 (attached hereto) clearly demonstrates this by the difference of the amount of microbes in ancient salty water in each of the present invention and Kaoru et al. Particularly, as regards this distinction, it has become a significant problem in combination with recent marine pollution.

On the other hand, in the present invention, the term “ancient water and/or ancient salty water” means ancient water and/or salty water having been buried for a long term in an environment shut off from the external world in a fracture zone of porous coral skeletons present in a layer lower (deeper) than the metamorphic rock layer formed by earth heat and ground pressure through a history of complex crustal alteration including upheaval and subsidence in ancient times (see paragraph [0049] of the present specification).

In the present invention, as described above, not only “present in a layer lower than the metamorphic rock layer” but also “sealed in a fracture zone present in a layer lower than the metamorphic rock layer” are required.

As described in paragraphs [0050]-[0056] of the specification of the present invention, the metamorphic rock layer, the chart layer, for example, is made of a dense and very hard biogenetic rock produced by the piling up of remains of silicious radiolarians well propagated (2 hundred million) and several tens of millions of years ago, and transformation by ground pressure and earth heat, and no supply of air

(oxygen) occurs to a layer lower than the chart layer, which lower layer has been present in a reducing atmosphere for a long duration, during which, for example, a metal ion with a high atomic valence such as a ferric salt was reduced to a metal ion with a low atomic valance, such as a ferrous salt, or the environment of which lower layer is caused to be a reducing atmosphere with the help of various sulfides, thereby revealing an extremely high oxidation and reducing potential (minus several hundred mV) in an original stare.

The ancient water and/or ancient salty water is sealed in a fractured zone present in a layer lower than the metamorphic rock layer, rich in an iron component and a sulfur component (sulfide or the like), has an oxidation reduction potential (reducing ability) as high as minus several hundreds of mV reduction, which is almost not experienced for a long term, even after exposure to air, and sustains a high oxidation reduction potential over a long term. Therefore, the ancient water and/or ancient salty water is sufficiently preserved and managed by exercising ordinary caution, for example closing by a cap, sealing or the like, without the necessity for adopting a container with a special structure, and furthermore, enables suppression of generation and accumulation of active oxygen and lipid peroxide in the skin and the body of an organism over a long term.

Since the ancient water and/or the ancient salty water has been perfectly sealed in the dense and extremely hard metamorphic rock layer without contact with the external world over a long term, the ancient water and/or the ancient salty water

has absolutely no chance of being infiltrated or intruded by sea water, rainfall water or polluted ground water, even while being sequentially drawn up (see Material 3 included as an attachment).

Actually, even if the ancient water and/or the ancient salty water is sequentially drawn up over a long term, neither a change occurs in salt concentration nor occurs a change in oxidation reduction potential in the ancient salty water. Therefore, the ancient water and/or the ancient salty water has absolutely no chance to be polluted with a harmful material by sea water, ground water or rainfall water (see attached Material 3).

Therefore, ancient water and the ancient salty water used in the present invention can be any of ancient water or ancient salty water sealed in a fractured zone present in a layer lower than the metamorphic rock layer, and to be concrete, the ancient water or the ancient salty water can be drawn up directly from the fracture zone, can be drawn up from a pool into which it exudes from the fractured zone to stay and accumulate there and can be pumped up from a river formed underground with ancient water or ancient salty water, any of which may be adopted.

Since the metamorphic rock layer is a very hard and dense layer, ancient water and ancient salty water sealed in a fracture zone present in a layer deeper than the metamorphic rock layer is present in a state perfectly disconnected from the external world and has characteristics of being especially rich in mineral component and of being higher in reducing property (see Materials 1 and 4 attached hereto).

As a result, ancient water and/or ancient salty water is extremely high in reducing property, suppresses generation of lipid peroxide, not only suppress increase in melanin pigment, but accelerates decrease thereof, rejuvenates a skin age, not only cancels causes for generation of stain, flecks, skin roughness, darkness, wrinkles, flabbiness, alopecia and the like, but also removes stain and flecks. Furthermore, the effect of the ancient water and/or the ancient salty water are exemplified as follows: in the skin, with the help of uptake of minerals, improvement is achieved on homeostasis sustaining ability that the skin intrinsically has to cure symptoms such as skin roughness, xeroderma, chilblain, rash, allergy, atopic dermatitis and the like, while in intra-corporeal organs, generation of lipid peroxide is suppressed, activity of normal cells are promoted by reducing and removing lipid peroxide, organs are held in healthy conditions and sustained therein to cancel various diseases such as pimples, shoulder stiffness, neuralgia, and over-sensitiveness to the cold (see paragraphs [0102]- [0106] of the specification of the present invention),

As stated above, the present invention selectively uses ancient water and/or ancient salty water sealed in a fracture zone present in a layer lower than the metamorphic rock layer, and thereby expresses features above, which are not reached by Kaoru et. that just uses "salty water having been buried in an environment shut off from the external world in depth of the crust in a state sealed in porous coral skeletons of a coral reef for as long a time as tens of thousands of years

through a history of complex crustal alteration including upheaval and subsidence in ancient times",

That to say, "ancient water and/or ancient salty water sealed in a fracture zone present in a layer lower than the metamorphic rock layer" of the present invention, compared to the ancient salty water of Kaoru et al., has characteristics of being especially rich in mineral component and of being much higher in reducing property (as shown in attachment Materials 1, 4, and 5), and is able to reduce rusted nails immediately (as shown in attachment hereto, identified as Material 6),

These effects of the present invention can be particularly obtained from "ancient water and/or ancient salty water sealed in a fracture zone present in a layer lower than the metamorphic rock layer" but cannot be obtained from "salty water having been buried in an environment shut off from the external world in depth of the crust in a state sealed in porous coral skeletons of a coral reef for as long a time as tens of thousands of years through a history of complex crustal alteration including upheaval and subsidence in ancient times".

While mentioned in part above, applicant attaches hereto Materials 1-7, listed below with a description of each of their significance.

Material 1: Measured result of oxidation reduction potential of ancient salty water (present invention and Kaoru et al., for comparison)

Material 2: Measured result of change in salt concentration of ancient salty water (present invention and Kaoru et al., for comparison)



Material 3: Measured result of microbial test of ancient salty water (present invention and Kaoru et al., for comparison)

Material 4: Mineral component list of ancient salty water (present invention)

Material 5: Mineral component list of ancient salty water (Kaoru et al.)

Material 6: Result of reduction test with red rusted nails (present invention and Kaoru et al., for comparison)

Material 7: Location of sampling ancient salty water of Okinawa Island (present invention and Kaoru et al., for comparison)

In view of the above, claim 7 particularly describes and distinctly claims at least one element not disclosed in the cited reference. Therefore, reconsideration of the rejection of claim 7 and its allowance are respectfully requested.

Applicant respectfully requests a three (3) month extension of time for responding to the Office Action. **The fee of \$555 for the extension is provided for in the charge authorization presented in the PTO Form 2038, Credit Card Payment form, provided herewith.**

If there is any discrepancy between the fee(s) due and the fee payment authorized in the Credit Card Payment Form PTO-2038 or the Form PTO-2038 is missing or fee payment via the Form PTO-2038 cannot be processed, the USPTO is hereby authorized to charge any fee(s) or fee(s) deficiency or credit any excess payment to Deposit Account No. 10-1250.

In light of the foregoing, the application is now believed to be in proper form for allowance of all claims and notice to that effect is earnestly solicited.

Respectfully submitted,  
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enc: Form PTO-2038, and attachments including Materials 1-7.



## Material 1

Oxidation reduction potential of ancient salty water

Ancient salty water	Oxidation reduction potential	Temperature
Ancient salty water of the present invention (after 20 days from when the water was sampled)	-330 mV	20.2°C
Ancient salty water sealed in coral reefs of Kaoru et al. (after 20 days from when the water was sampled)	75 mV	20.1°C

Measuring instrument (PINPOINT® ORP Monitor, Q035292, manufactured by American Marine Inc.)

## Material 2

Change in salt concentration

Date of water sampling	May 26, 2000	June 18, 2002
Salt concentration		
Concentration of ancient salty water sealed in coral reefs of Kaoru et al. (%)	3.1	2.6

Ancient salty water of the present invention has been sampled from March 10, 2003 up to the present date, however no change in the salt concentration (3.3%) has been observed.

The salt concentration was measured with a measuring instrument (hydrogen ion concentration meter with a glass electrode (a pH meter), WM-22EP, DKK-TOA CORPORATION).

## Material 3

## Microbial test results

	GPLP (Fungus: mold)	SCDLP (Bacteria)
Ancient salty water of the present invention	0 pieces/g	2 pieces/g
Ancient salty water of Kaoru et al.	5 pieces/g	$10^4$ pieces/g

No coliform was detected in any samples.

Material 4

No. 13-20050208-007

Certificate of Analysis

February 15, 2005

Mie Prefectural Environmental  
Conservation Agency

Name: Okuzen Corporation

To: Mr. Yoshitaka Oku

Water quality analysis of ancient salty water  
(ancient salty water of the present invention)

Sample name	Ancient salty water	Date and time of sampling	(Time), February 4, 2005
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The results of the test requested on February 7, 2005 are as follows.

Test item	Test result	Unit	Test method
Potassium	481	mg/l	Standard Methods for Examination of Water 6-3.8.3
Calcium	543	mg/l	Standard Methods for Examination of Water 6-3.9.3
Magnesium	1380	mg/l	Standard Methods for Examination of Water 6-3.6.3
General bacteria	0	pieces/ml	Public Notice of the Ministry of Health, Labor and Welfare, No. 261 of 2003 (Appendix 1)
Coliform	Negative		Public Notice of the Ministry of Health, Labor and Welfare, No. 261 of 2003 (Appendix 2)
Cadmium and its compounds	<0.001	mg/l	Public Notice of the Ministry of Health, Labor and Welfare, No. 261 of 2003 (Appendix 6)
Mercury and its compounds	<0.00005	mg/l	Public Notice of the Ministry of Health, Labor and Welfare, No. 261 of 2003 (Appendix 7)
Lead and its compounds	0.002	mg/l	Public Notice of the Ministry of Health, Labor and Welfare, No. 261 of 2003 (Appendix 6)
Arsenic and its compounds	<0.001	mg/l	Public Notice of the Ministry of Health, Labor and Welfare, No. 261 of 2003 (Appendix 6)
Hexavalent chromium compounds	0.025	mg/l	Public Notice of the Ministry of Health, Labor and Welfare, No. 261 of 2003 (Appendix 6)
Cyanide ion and cyanogens chloride	<0.001	mg/l	Public Notice of the Ministry of Health, Labor and Welfare, No. 261 of 2003 (Appendix 12)
Nitrate nitrogen and nitrite nitrogen	0.04	mg/l	Public Notice of the Ministry of Health, Labor and Welfare, No. 261 of 2003 (Appendix 13)
Fluorine and its compounds	1.1	mg/l	Public Notice of the Ministry of Health, Labor and Welfare, No. 261 of 2003 (Appendix 13)
Iron and its compounds	<0.03	mg/l	Public Notice of the Ministry of Health, Labor and Welfare, No. 261 of 2003 (Appendix 5)
Chloride ion	20000	mg/l	Public Notice of the Ministry of Health, Labor and Welfare, No. 261 of 2003 (Appendix 13)
(Remarks)			
Person in charge of test: Yasushi Hasegawa			

## Material 5

Health and Environment Division  
Mie Prefectural Science and Technology Promotion Center

To: Mr. Yoshitaka Oku  
Okuzen Corporation

Ancient salty water sealed in coral reefs of Kaoru et al., carried in on the last day of  
August 2002

## Examination and test results

Test item	Test result
pH value	7.2
Arsenic	0.025 mg/L
Cadmium	0.0001 mg/L
Mercury	Less than 0.0005 mg/L
Selenium	0.011 mg/L
Lead	0.0002 mg/L
Hexavalent chromium	Less than 0.001 mg/L
Vanadium	0.0021 mg/L
Iron	0.28 mg/L
Sodium	9750 mg/L
Molybdenum	0.0027 mg/L
Nickel	0.0053 mg/L
Chlorine ion	17860 mg/L
Lithium	0.044 mg/L
Potassium	352 mg/L
Calcium	450 mg/L
Magnesium	1183 mg/L
Aluminum	0.002 mg/L
Strontium	4.1 mg/L
Rubidium	0.026 mg/L
Barium	0.0069 mg/L

## Material 6

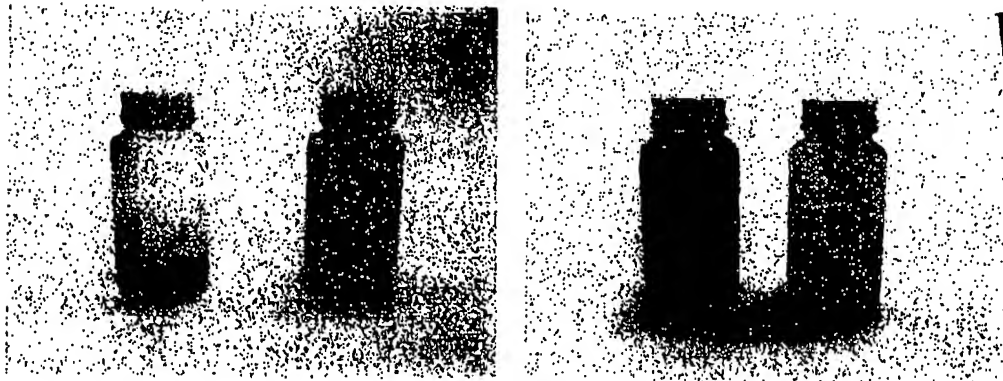
## Reduction test with red rusted nails

A

B

A'

B'



A: Photo of a sample of red rusted nails in ancient water of the present invention after a lapse of 30 days since they were immersed in the water  
(The nails are darkly discolored; it shows that red rust has been reduced.)

B: Photo of a sample of red rusted nails in ancient water of Kaoru et al. after a lapse of 30 days since they were immersed in the water  
(There is little change in color of the nails; it shows that red rust has not been reduced.)

A': Photo of the sample A immediately after it was shaken

B': Photo of the sample B immediately after it was shaken

## Material 7

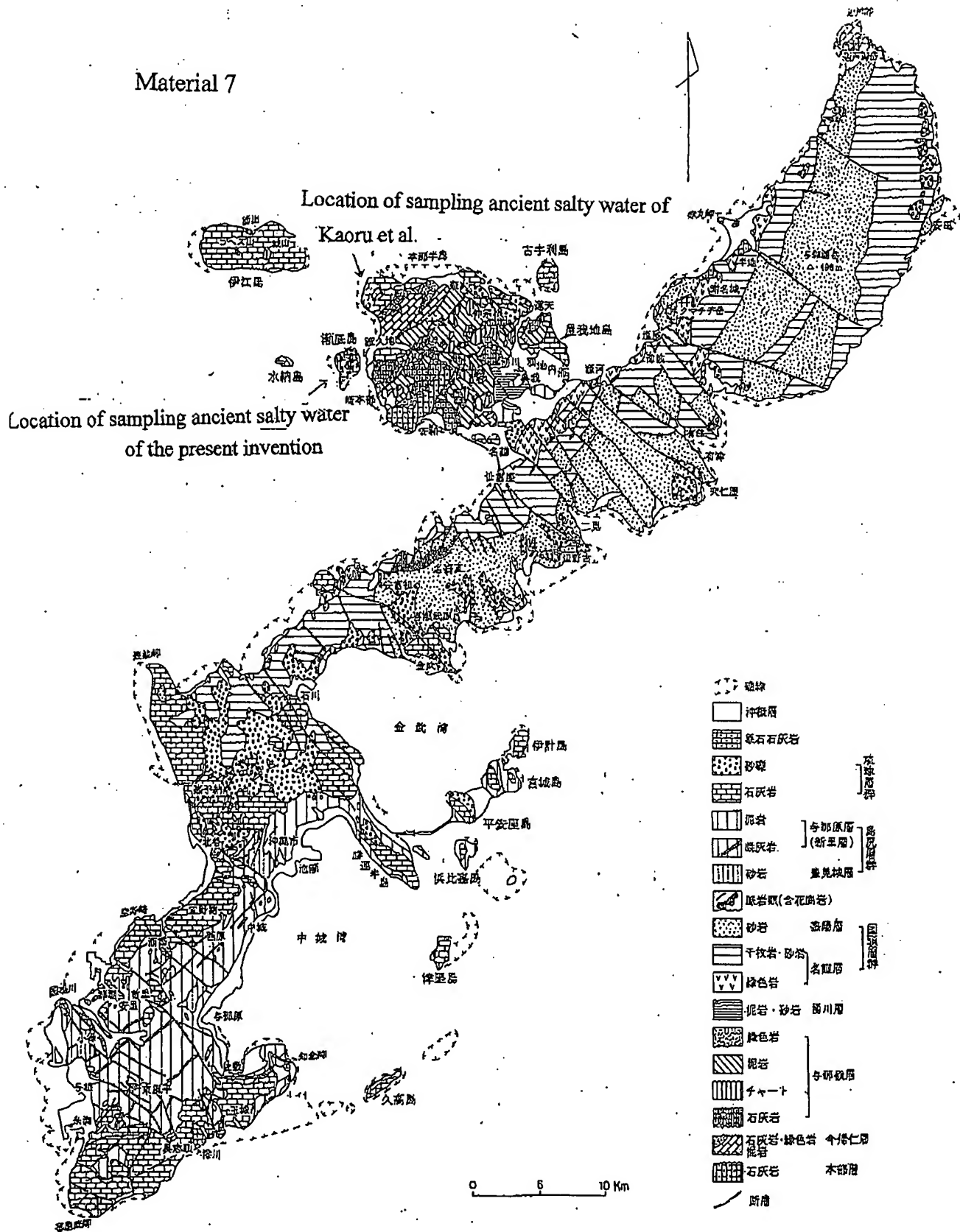


図 8-7-1 Geological map of Okinawa Island